

TYPE SPECIMENS OF AMPHIBIANS, REPTILES, BIRDS AND MAMMALS IN THE AUCKLAND INSTITUTE AND MUSEUM

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Abstract. Included in the natural history collections of the Auckland Institute and Museum are type specimens pertaining to 34 species or subspecies of amphibians, reptiles, birds and mammals. In particular there are 26 name-bearing holotypes, lectotypes or neotypes. Details of these, and of plastotypes and paratypes, are given. The species involved are from mainland New Zealand, the Kermadec Islands, the Chatham Islands and from Heard and Kerguelen Islands in the subantarctic. Some are known only from fossils or subfossils. A lectotype of the skink *Leiolopisma smithi numerale* McCann, 1955 is nominated from among the syntypes.

Powell (1941, 1949) listed the species of amphibians and birds for which there were primary types in the collection of the Auckland Institute and Museum (AIM). The list is repeated here, and updated to include subsequent acquisitions of type material of reptiles, birds and mammals. Species are listed by their original names arranged alphabetically within each family. Where a name has since been synonymised this is indicated. Current (and former) catalogue numbers of the types are given. For holotypes, lectotypes, neotypes and plastotypes full details are provided of sex, locality, date of collection and collector where these are known. These details are the fullest account to be gleaned from the published descriptions, catalogue entries and any original labels.

Paratypes are problematical as the provisions of the International Code of Zoological Nomenclature (1961) regarding paratypes are unsatisfactory (see discussion by Melville 1970). Article 72(b) of the Code provides that every specimen cited in a description as belonging to a new species (except variants etc.) belongs also to the type-series of that species. Recommendation 73D suggests that all members of the type-series other than the holotype should be considered paratypes. No way of further restricting the number of paratypes is prescribed in the Code. This means that there is no agreed middle ground between ignoring paratypes altogether or accepting as paratypes nearly all specimens the author cited (the principle adhered to in this list). The latter causes various problems when the type-series is hard to delimit or very large. In this paper the total number of paratypes (or paralectotypes) established in the description of the species is given, followed by the number acquired by the Auckland Museum.

CLASS AMPHIBIA

Family LEIOPELMATIDAE

(New Zealand Frogs)

Leiopelma archeyi Turbott, 1942

Trans. Proc. R. Soc. N.Z. 71: 248, Pl. 42.

Holotype: H43 (formerly AMPH 2.1); adult female; Tokatea, near Coromandel; date and collector not known.

Paratypes: 14 established. All deposited at AIM (H44-H57; formerly AMPH 2.2-2.15 respectively).

Notes: H51 is currently missing. H57 was given to the Museum of Comparative Zoology, Harvard in 1948.

CLASS REPTILIA

Family SCINCIDAE

(Skinks)

Leiopisma alani Robb, 1970

Proc. Kon. Ned. Akad. Wet. C78: 477, Fig. 1, Pls. I, II.

Holotype: H560 (author's number R34); adult male; Green Island, Mercury group; July 1967; A. Thoresen.

Paratypes: 4 established. None at AIM.

Notes: Transferred to the genus *Cyclodina* by Hardy (1977).

Leiopisma fallai McCann, 1955

Dom. Mus. Bull. 17: 87, Pl. X, Fig. 12.

Paratypes: 7 established. AIM has 4 (H510-H513; formerly REP 36.1-36.4; author's numbers S83-S86 respectively).

Leiopisma gracilicorpus Hardy, 1977

N.Z. J. Zool. 4: 241, Fig. 7.

Holotype: H403 (formerly REP 31.1); Hokianga; presented Mr Webster before 1955.

Paratypes: None established.

Notes: A search of Museum records has yielded no further data on this specimen. The Mr Webster may have been John Webster (1818-1912) who first lived in the Hokianga area in 1841 and who joined the Auckland Institute in 1872. However, later Websters from Hokianga have given specimens to the Museum. McCann listed this specimen as a male in his hand-written notes.

***Leiolopisma macgregori* Robb, 1975**

Proc. Kon. Ned. Akad. Wet. C78: 480, Fig. 1, Pls. I, II.

Holotype: H558 (author's number R72); adult female; Sail Rock, Bream Bay; May 1974; J. Robb.

Paratypes: 6 established. AIM has two (H559 and H614; author's numbers R3 and R73 respectively).

Notes: Transferred to the genus *Cyclodina* by Hardy (1977).

***Leiolopisma pachysomaticum* Robb, 1975**

Proc. Kon. Ned. Akad. Wet. C78: 477 Fig. 1, Pls. I, II.

Holotype: H538 (author's number R67); adult female; Ruamahua-nui Island, Aldermen group; November 1972; A.H. Whitaker.

Paratypes: 9 established. AIM has 3 (H535-H537; formerly REP 40.1-40.3; author's numbers R48-R50 respectively).

Notes: Synonymised under *Cyclodina oliveri* (McCann, 1955) by Hardy (1977).

***Leiolopisma smithi numerale* McCann, 1955**

Dom. Mus. Bull. 17: 99.

In the description of this subspecies McCann (1955) indicated that the type was among specimens in the Auckland Museum collected from Sladden Island by B. Sladden, January 1926. McCann listed other specimens from "Mercury Island" collected by Falla and also in the Auckland Museum. There are in the collection four specimens of this subspecies from Sladden Island and two from the Mercury Islands. All were examined by McCann, but neither the description, nor the specimen labels, nor McCann's hand-written notes on the specimens, indicate which is the holotype. I therefore take the opportunity here of nominating a Sladden Island specimen as lectotype, since this was not done by the last reviser (Hardy 1977). All specimens from both islands are conspecific and morphologically alike. I have chosen McCann's first-numbered specimen (S15) as lectotype.

Lectotype: H437 (formerly REP 34.1; author's number S15); male; Sladden Island, off Great Mercury Island; January 1926 (the catalogue gives 1920 as the date of collection); B. Sladden. Measurements: snout to vent length 65 mm, tail length 48 mm (tail twice regenerated), snout to forelimb length 25 mm, axilla to groin length 33 mm.

Paralectotypes: 5 established. All deposited at AIM (H438-H440; formerly REP 34.2-34.4; author's numbers S16-S18 respectively. H455-H456; formerly REP 34.22-34.23; author's numbers S65-S66 respectively).

Notes: H439 was given to the National Museum in 1952 and is numbered R565. This subspecies was not recognised in the revision by Hardy (1977).

***Leiolopisma turbotti* McCann, 1955**

Dom. Mus. Bull. 17: 114, Fig. 13.

Holotype: H516 (formerly REP 37.1; author's number S142); female; The Pyramid, Chatham Islands; 16 December 1937; E.G. Turbott.

Paratypes: 13 established. AIM has one (H517; formerly REP 37.2; author's number S143).

Notes: Synonymised under *Leiolopisma nigriplantare nigriplantare* (Peters, 1873) by Hardy (1977).

***Mocoa smithii* Gray, 1845**

Cat. Liz. Coll. Brit. Mus.: 82.

Paralectotypes: 38 established. AIM has one (H613; British Museum registration number 1946.8.17.29; 'N. Zealand. Presented by the Admiralty, from the Antarctic Expedition.').

Notes: Now in the genus *Leiolopisma*. See McCann (1955) for lectotype designation. H613 was apparently collected in the Bay of Islands in 1841.

CLASS AVES

Family DINORNITHIDAE

(Moas)

***Dinornis crassus* Owen, 1846**

Proc. Zool. Soc. Lond. for 1846: 46.

Plastotype: B722 (formerly AM 298, MOA 11.7 and British Museum registration number A.186); cast of left tarsometatarsus (subfossil) made at the British Museum 1938; original bone obtained from Waikouaiti by P. Earl (see Lydekker 1891).

Notes: Species accepted (in the genus *Emeus*) by Cracraft (1976).

Dinornis maximus Owen, 1869

Trans. Zool. Soc. Lond. 6: 497, Pls. 89, 90.

Plastotype: B724 (British Museum registration number A.161); casts of associated left femur, left tibiotarsus and right tarsometatarsus (subfossils) made at the British Museum 1938; original bones obtained August 1865 from Glenmark Swamp, Canterbury, by J. Michael (see Lydekker 1891).

Notes: Synonymised under *Dinornis giganteus* Owen, 1844 by Cracraft (1976).

Dinornis oweni Haast, 1885

Proc. Zool. Soc. Lond. for 1885: 482.

Lectotype: B721 (formerly AM 384 and MOA 9.9); subadult skull (subfossil) incorrectly reconstructed; Pataua, near Whangarei; 1878; T. F. Cheeseman.

Paralectotypes: None established. Millener (1982) showed that the postcranial elements of the skeleton described by von Haast (AM 384) belong to *Pachyornis mappini* Archey, 1941.

Notes: See Millener (1982) for lectotype designation. Synonymised under *Anomalopteryx didiformis* (Owen, 1844) by Millener (1982).

Dinornis torosus Hutton, 1891

N.Z. J. Sci. (new issue) 1: 248.

Lectotype: B723 (formerly AM 352 and MOA 7.3); almost complete skeleton (subfossil; mounted); Takaka, Nelson district; R.I. Kingsley.

Paralectotypes: One established; not at AIM.

Notes: See Archey (1941) for lectotype designation. Species accepted by Cracraft (1976).

Euryapteryx tane Oliver, 1949

Dom. Mus. Bull. 15: 105, Figs. 73-78.

Holotype: B725 (formerly AM 3 and MOA 15.1); almost complete skeleton (subfossil; unmounted); Paremata, Doubtless Bay; L.J. and G. Matthews.

Paratypes: The type-series is difficult to delimit; some other AIM specimens are referred to in the description.

Notes: Synonymised under *E. curtus* (Owen, 1846) by Cracraft (1976).

Megalapteryx benhami Archey, 1941

Bull. Auckland Inst. Mus. 1: 35.

Holotype: B718 (formerly AM 254 and MOA 14.1); subfossil femur; Mount Arthur tableland, Nelson district; probably collected 1933; G. Archey.

Paratypes: One established. Deposited at AIM (B719; formerly AM 254 and MOA 14.1; subfossil tibiotarsus).

Notes: Species tentatively accepted by Cracraft (1976).

Pachyornis mappini Archey, 1941

Bull. Auckland Inst. Mus. 1: 41, Figs. 9-11, Pls. 4, 5, 7, 9-12, 15.

Holotype: B720 (formerly AM 124 and MOA 8.32); almost complete skeleton (subfossil; mounted); Mangaotaki, Waitomo district; 1933; F.C. Mappin.

Paratypes: The type-series is difficult to delimit. In addition to the holotype, Archey (1941) referred about 14 specimens (most of them at AIM) to this species.

Notes: Species accepted by Cracraft (1976).

Pachyornis septentrionalis Oliver, 1949

Dom. Mus. Bull. 15: 61, Figs. 29-37.

Paratypes: About 11 specimens at AIM could probably be construed as belonging to the type-series of this species.

Notes: Synonymised under *P. mappini* Archey, 1941 by Cracraft (1976).

Family DIOMEDEIDAE

(Albatrosses)

Thalassarche cauta steadi Falla, 1933

Rec. Auckland Inst. Mus. 1:179, Pl. 32.

Holotype: AV 153.3; adult male; Foveaux Strait; December (November on label) 1931; E.F. Stead.

Paratypes: Falla referred to a female specimen but gave no repository. There is no such specimen at AIM.

Notes: Listed under *Diomedea cauta cauta* Gould, 1841 by Fleming (1953).

Family PROCELLARIIDAE

(Fulmars, Petrels & Shearwaters)

Oestrelata leucophrys Hutton, 1893*Proc. Zool. Soc. Lond.* for 1893: 752, Pl. LXIII.*Holotype*: AV 135.34 (formerly AV 215.1); in poor condition; Sunday Island, Kermadec group; 1889; T. Bell.*Paratypes*: One established. Repository not stated.*Notes*: Listed under *Pterodroma neglecta* (Schlegel, 1863) by Condon (1975).**Pachyptila belcheri orientalis** Falla, 1937*B.A.N.Z.A.R.E. Rep.* (B) 2: 200, Figs. 154, 174.*Paratypes*: Almost the entire type-series of 22 specimens (including eggs) is at AIM.*Notes*: The holotype is not currently at AIM, though it probably should be. The subspecies is not recognised in the current checklist (Kinsky 1970).**Pachyptila eatoni pyramidalis** Fleming, 1939*Emu* 38: 400.*Holotype*: AV 1408.2 (formerly AV 209.52; author's number 325); adult male; Pyramid Rock, Chatham group; 16 December 1937; C.A. Fleming.*Paratypes*: 10 established. None at AIM.*Notes*: Treated as *P. crassirostris pyramidalis* Fleming, 1939 by Kinsky (1970).**Pachyptila salvini muriwai** Mathews & Hallstrom, 1943*Notes Order Procell.*: 23.*Lectotype*: AV 146.17 (formerly AV 1386.2); female; Muriwai Beach, Auckland; 21 May 1934; R.A. Falla.*Paralectotypes*: One established. Deposited at AIM (AV 146.16; formerly AV 1386.1).*Notes*: See Fleming (1945) for lectotype designation. The race is not recognised in current checklists (Kinsky 1970, Condon 1975).

Pachyptila turtur fallai Oliver, 1930

N.Z. Birds 1st ed.: 114.

Holotype: AV 209.22 (formerly AV 213.1); immature male; Otago; W. Smyth; probably purchased from Smyth 1886 or 1887.

Paratypes: 2 established. Repositories not stated.

Notes: The race needs confirmation (Kinsky 1970).

Pseudoprion turtur armiger Mathews & Hallstrom, 1943

Notes Order Procell.: 23.

Neotype: AV 209.54 (previously F.715); adult male; Aorangi Island, Poor Knights group; December 1940.

Notes: See Fleming (1945) for neotype designation. The species is now in *Pachyptila* and the race needs confirmation (Kinsky 1970).

Pterodroma pycrofti Falla, 1933

Rec. Auckland Inst. Mus. 1: 176, Pl. 31.

Holotype: AV 200.2 (formerly AV 148.5); adult male; Taranga (Hen Island); 27 January 1932; R.A. Falla.

Paratypes: 2 established. Both at AIM (AV 200.1, AV 200.3).

Notes: The species is recognised in the New Zealand checklist (Kinsky 1970) but synonymised under *Pterodroma cookii* (Gray, 1843) in the Australian checklist (Condon 1975).

Puffinus assimilis haurakiensis Fleming & Serventy, 1943

Emu 43: 119.

Holotype: AV 130.9; adult male; Lizard Island, Mokohinau group; 4 October 1933; R.A. Falla.

Paratypes: The type-series of at least 17 specimens cannot easily be delimited as no repositories are given.

Notes: The race is recognised in the current checklist (Kinsky 1970).

Family HYDROBATIDAE

(Storm Petrels)

Oceanites oceanicus parvus Falla, 1937*B.A.N.Z.A.R.E. Rep.* (B) 2: 208.*Holotype*: AV 1202.8 (BANZARE number 1073); male; Royal Sound, Kerguelen Island; 10 February 1930; R.A. Falla.*Paratypes*: 6 established. Three at AIM (B3722, AV 1202.9 and AV 1202.10; BANZARE numbers 818, 1074 and 1075 respectively).*Notes*: The race is doubtfully distinct (Condon 1975).

Family PELECANIDAE

(Pelicans)

Pelecanus conspicillatus novaezealandiae Scarlett, 1966*Notornis* 13: 204, Figs. 1-11.*Paratypes*: 5 established. One at AIM (subfossil bones; not numbered).*Notes*: The AIM paratype is currently missing.

Family PHALACROCORACIDAE

(Shags)

Phalacrocorax atriceps nivalis Falla, 1937*B.A.N.Z.A.R.E. Rep.* (B) 2: 226, Figs. 182, 183, 185.*Holotype*: AV 1398.1 (BANZARE number 460); female; Atlas Cove (Corinthian Bay on label), Heard Island; 29 November 1929; R.A. Falla.*Paratypes*: 2 established. Both at AIM (AV 1398.2 and AV 1398.3; BANZARE numbers 458 and 459 respectively).

Family RALLIDAE

(Rails)

Capellirallus karamu Falla, 1954

Rec. Auckland Inst. Mus. 4: 242, Pls. 40-42.

Holotype: B7 (formerly AV 901.1); incomplete subfossil skeleton; Karamu Cave, near Pirongia; 1948; H.G. Lambert.

Paratypes: Several established. None at AIM.

Family SCOLOPACIDAE

(Curlews, Snipes, etc.)

Coenocorypha aucklandica barrierensis Oliver, 1955

N.Z. Birds 2nd ed.: 275.

Holotype: AV 1389.1 (formerly 186 and AV 78.2); Little Barrier Island; 1870; Captain Bennett (presented T.B. Hill).

Paratypes: None established.

Notes: The race is not mentioned in the current checklist (Kinsky 1970), but see discussion by Turbott (1961).

Family AEGOTHELIDAE

(Owlet-nightjars)

Megaegothales novaezealandiae Scarlett, 1968

Notornis 15: 254, Pls. XL-XLII.

Paratypes: 34 established. AIM has one (B341; subfossil bones).

Family MELIPHAGIDAE

(Honeyeaters)

Anthornis melanura obscura Falla, 1948

Rec. Auckland Inst. Mus. 3: 337.

Holotype: AV 15.22; adult male; Three Kings Islands; 20 February 1934; R.A. Falla.

Paratypes: 2 established. Both at AIM (AV 15.23 and AV 15.24; mounted).

Notes: The race is accepted in the current checklist (Kinsky 1970). The type locality is Great Island since the 1934 expedition landed only on that island (Turbott & Buddle 1948).

CLASS MAMMALIA

Family OTARIIDAE

(Sealions & Fur Seals)

Neophoca palatina King, 1983

N.Z. J. Mar. Freshwater Res. 17: 120, Figs. 1, 4, 7, 9.

Holotype: MAM 175.1; adult male skull (fossil); Ohope Beach, Bay of Plenty; pres. C. McCready 1939.

Paratypes: None established.

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